

ABSTRACT OF THE DISCLOSURE

There is provided not only a radio frequency power amplifier using an SiGe HBT subject to a little amplification distortion, but also a communication system  
5 using the same. A conventional radio frequency power amplifier provides base bias paths of transistors  $Q_1$  through  $Q_N$  (SiGe HBT) with bias resistors  $R_{11}$  through  $R_{1N}$  having resistance values three to five times higher than those of a ballast resistor attached to each transistor's base. A  
10 coil  $L_B$  is provided in parallel with the bias resistor as a means for compensating a voltage drop due to direct current component  $I_{DC}$  flowing through the bias resistor. Addition of the bias resistor suppresses non-linearity of low-frequency variations in an output current. Addition of  
15 the coil compensates for voltage drop. Accordingly, the maximum linear output power can be improved. As a result, it is possible to provide the power amplifier subject to a little amplification distortion within a wide output range.